

fu



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/630,902	08/02/2000	Jayant D. Patel	7784-000135	7985

7590 04/09/2003

Harness Dickey & Pierce PLC  
PO Box 828  
Bloomfield Hills, MI 48303

EXAMINER

HOOK, JAMES F

ART UNIT	PAPER NUMBER
----------	--------------

3752

10

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
**09/630,902**

Applicant(s)  
**Patel**

Examiner  
**James F. Hook**

Art Unit  
**3752**



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jan 27, 2003
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above, claim(s) 9-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 16, and 18-26 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

Art Unit: 3752

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Lalikos. The patent to Lalikos discloses the recited duct assembly comprising a first portion which is a rigid portion and a second portion that is a flexible hose, where the two parts are connected together, a support collar 26 surrounds the first portion adjacent the second portion and covers and holds a reinforcing wire layer 22 over part of the first portion and the entire second portion, there is end structure for connection to another apparatus, where the support collar and reinforcement would protect the first and second portions from any build up of stress, and the collar can be seen to be a circular sleeve which inherently has a hollow cross section.

3. Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Caplan. The patent to Caplan discloses the recited duct assembly and method of assembling it comprising a first portion 30 which is non-corrugated and therefore stiffer than a second portion 31 provided with corrugations, where the two parts are connected together, a support collar 35 surrounds the first portion adjacent the second portion and covers and holds a reinforcing wire 35 over part of the

Art Unit: 3752

first portion and the entire second portion, in some figures the end is shown to have a larger diameter than the remaining section of the tube, and can be formed with a beaded end portion 50, where inherently the support collar and reinforcement would protect the first and second portions from any build up of stress, and it is also considered inherent that upon making the article one would have to select a diameter and a pitch based on the diameter to form the article as required in claim 16, and where the second portion can be covered with a cover layer 78.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-8, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lalikos in view of Caplan. The patent to Lalikos discloses all of the recited structure with the exception of forming the reinforcement of a helix. The patent to Caplan discloses the recited duct assembly and method of assembling it comprising a first portion 30 which is non-corrugated and therefore stiffer than a second portion 31 provided with corrugations, where the two parts are connected together, a support collar 35 surrounds the first portion adjacent the second portion and covers and holds a reinforcing wire 35 over part of the first portion and the entire second portion, in some figures the end is shown to have a larger diameter than the remaining section of

Art Unit: 3752

the tube, and can be formed with a beaded end portion 50, where inherently the support collar and reinforcement would protect the first and second portions from any build up of stress, and it is also considered inherent that upon making the article one would have to select a diameter and a pitch based on the diameter to form the article as required in claim 16, and where the second portion can be covered with a cover layer 78. It would have been obvious to modify the reinforcing layer of Lalikos to be formed of a helical reinforcement as suggested by Caplan, as such would provide for a stiffer reinforcement which is easier to produce than a woven sheath but still provides adequate strength to the tube to retain its form. The size of the support collar is considered an obvious choice of mechanical expedients and it would have been obvious to one skilled in the art to vary the size of the collar in Lalikos to meet the needs of the user as such would only require routine skill in the art to change dimensions as such is an obvious choice of mechanical expedients.

6. Claims 18, 20, 21, and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caplan in view of Sindars. The patent to Caplan discloses all of the recited method of assembly with the exception of forming the tube from three separate sections that are connected together to form the tube. The patent to Sindars discloses the recited method of forming a tube comprising sections having corrugations 82 and sections without corrugations 88 where the corrugated sections are separate from the uncorrugated sections and are connected together to form the tube. It would have been obvious to one skilled in the art to form the tube in Caplan using the method of providing separate corrugated and uncorrugated portions and connecting

Art Unit: 3752

them together to form the hose as such is an equivalent method of providing a corrugated section which is another known method in addition to just forming a tube with a corrugated portion as suggested by Sindars.

7. Claims 19 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caplan in view of Sindars, as applied to claims 18, 20, 21, and 23-25 above, and further in view of Roberts. The patent to Caplan as modified discloses all of the recited structure with the exception of forming the cover layer of a rubber sleeve. The patent to Roberts discloses the recited duct assembly comprising an inner rubber layer 23 which has a first section having no corrugations 20, and a second portion having corrugations 21, where a reinforcement coil 29 reinforces the second portion, and a cover layer in the form of a rubber sleeve 24 is provided over the reinforcement to protect it. It would have been obvious to one skilled in the art to modify the cover layer in Caplan as modified to be formed of a rubber material as such is an equivalent sleeve used to protect the reinforcements over corrugated sections of tubes as suggested by Roberts, where the rubber is known to be more flexible than thermoplastics.

8. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Caplan in view of Sindars, as applied to claims 18, 20, 21, and 23-25 above, and further in view of Vohrer. The patent to Caplan as modified discloses all of the recited structure with the exception of forming the reinforcement of a thermoplastic material. The patent to Vohrer discloses reinforcing a corrugated duct member 4 with a spiral reinforcement 2 which can be made of a thermoplastic material. It would have been obvious to one skilled in the

Art Unit: 3752

art to modify the reinforcement in Caplan to be made of a thermoplastic material as suggested by Vohrer as such would provide the benefit of not rusting and being cheaper than metal wires used for reinforcement.

### *Response to Arguments*

9. Applicant's arguments filed January 27, 2003 have been fully considered but they are not persuasive. With respects to the arguments directed toward the application of Caplan on claims 1-4 is moot in view of the new grounds of rejection. With respect to the teachings of Caplan toward claim 16, it is considered that embedding the reinforcement in the layer is a form of bonding thereby meeting the claim language. With respect to the arguments directed toward the teachings of Sindars, upon reviewing the patent, even though bonding is not specifically disclosed between the overlapped sections in figure 11, it is considered that in the embodiment of figure 11 which states can also be longitudinally slit, it is clear that the sleeve would fall apart if longitudinally slit without the portions that overlap being bonded together therefore, even though it is not clearly disclosed it is considered to be inherent that the overlapped portions shown in figure 11 must be bonded in some way or the sleeve would not be able to function with a longitudinal slit.

### *Allowable Subject Matter*

Art Unit: 3752

10. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### *Conclusion*

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Dempsey, Walker, Sorg, Smisko, Davila, and Patel disclosing state of the art reinforced tubes.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

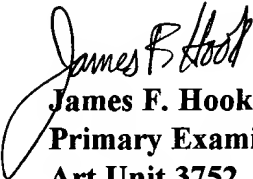
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.



Art Unit: 3752

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Hook whose telephone number is (703) 308-2913.

J. Hook  
April 7, 2003

  
**James F. Hook**  
**Primary Examiner**  
**Art Unit 3752**